



Dart Aerospace Ltd.  
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K6A 1K7  
Canada

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**RBE332A94-3400-03-16**  
**Job Sheet 191114**



**Part No:** RBE332A94-3400-03-16

**Job Qty:** 2 pcs

**Part Name:** Target Block 1 Fabrication



**Part Weight:** 0 lbs

**Status:** New

**Priority:** Medium

**Job Created:** 2/21/19

**Job Tracking No:**

**Due Date:** 3/22/19

**Created By:** Marie Lajeunesse

**Type:** SOLD

**Description:**

**Note:** DWG RBE332A94-3400-03 Rev A IPP Rev. A 19.02.19 New issue DP Verify DD

**Ship Via:**



**Container No:** S170130



**Part:** RBE332A94-3400-03-16

**Job No:** 191114

**Serial No/Batch:** S170130

**Revision:** A

**Inspector:**

**Exp Date:**

**Instructions:**

Dart Aerospace Ltd.  
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TEL: 1 613 632-5200  
Email: sales@dartaero.com  
www.dartaerospace.com

**Date:** 04/06/19

## Job Routing

| Op No | Operation                   | Qty   | Start Date | Due Date | Standard  |         | Workcenter/Supplier    |           | Sign-off          |
|-------|-----------------------------|-------|------------|----------|-----------|---------|------------------------|-----------|-------------------|
|       |                             |       |            |          | Setup Hrs | Run Hrs | Workcenter / Supplier  | Lead Time |                   |
| 100   | Small Fab - 1               | 2 pcs | 3/22/19    |          | 0.00      | 0.40    | Small Fab - 1          |           | MLL               |
|       |                             |       |            |          |           |         | Small Fab - 2          |           |                   |
|       |                             |       |            |          |           |         | Small Fab - 3          |           |                   |
|       |                             |       |            |          |           |         | Small Fab - 4          |           |                   |
|       |                             |       |            |          |           |         | Small Fab - 5          |           |                   |
|       |                             |       |            |          |           |         | Small Fab - 6          |           |                   |
|       |                             |       |            |          |           |         | Small Fab - 7          |           |                   |
| 110   | QC 5                        | 2 pcs | 3/22/19    |          | 0.00      | 0.00    | QC 5 - 10              |           | DAS<br>19<br>9-09 |
|       |                             |       |            |          |           |         | QC 5 - 12              |           |                   |
|       |                             |       |            |          |           |         | QC 5 - 17              |           |                   |
|       |                             |       |            |          |           |         | QC 5 - 18              |           |                   |
|       |                             |       |            |          |           |         | QC 5 - 19              |           |                   |
|       |                             |       |            |          |           |         | QC 5 - 22              |           |                   |
|       |                             |       |            |          |           |         | QC 5 - 24              |           |                   |
|       |                             |       |            |          |           |         | QC 5 - 3               |           |                   |
|       |                             |       |            |          |           |         | QC 5 - 42              |           |                   |
|       |                             |       |            |          |           |         | QC 5 - 43              |           |                   |
|       |                             |       |            |          |           |         | QC 5 - 49              |           |                   |
|       |                             |       |            |          |           |         | QC 5 - 51              |           |                   |
|       |                             |       |            |          |           |         | QC 5 - 58              |           |                   |
|       |                             |       |            |          |           |         | QC 5 - 68              |           |                   |
|       |                             |       |            |          |           |         | QC 5 - 9               |           |                   |
|       |                             |       |            |          |           |         | QC 5 - 50              |           |                   |
| 120   | Packaging 3-1 - Stock - B4B | 2 pcs | 3/22/19    |          | 0.00      | 0.00    | Packaging 3 - 1 - B4B  |           | DAS<br>21<br>9-09 |
|       |                             |       |            |          |           |         | Packaging 3 - 2 - B4B  |           |                   |
|       |                             |       |            |          |           |         | Packaging 3 - 3 - B4B  |           |                   |
|       |                             |       |            |          |           |         | Packaging 3 - 4 - B4B  |           |                   |
|       |                             |       |            |          |           |         | Packaging 3 - 5 - B4B  |           |                   |
|       |                             |       |            |          |           |         | Packaging 3 - 6 - B4B  |           |                   |
|       |                             |       |            |          |           |         | Packaging 3 - 7 - B4B  |           |                   |
|       |                             |       |            |          |           |         | Packaging 3 - 8 - B4B  |           |                   |
|       |                             |       |            |          |           |         | Packaging 3 - 9 - B4B  |           |                   |
|       |                             |       |            |          |           |         | Packaging 3 - 10 - B4B |           |                   |
| 130   | QC 21 - SA                  | 2 pcs | 3/22/19    |          | 0.00      | 0.00    | QC 21 - SA - 21        |           | DAS<br>21<br>9-09 |
|       |                             |       |            |          |           |         | QC 21 - SA - 70        |           |                   |
|       |                             |       |            |          |           |         | QC 21 - SA - 53        |           |                   |

Part Op 100 - Assemble as per DWG. See note 8 and 9.

Descriptions: 120 - The tool must be packaged with a desiccant bag into a tight fitting sealed plastic bag as per DWG.

## Job BOM

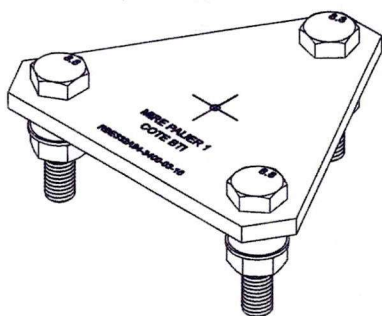
| Part / Item                       | Component Name                                                                       | Quantity     | Operation         | Container    |
|-----------------------------------|--------------------------------------------------------------------------------------|--------------|-------------------|--------------|
| 65 90591A171                      | Hex Nut                                                                              | 6 Ea (3 ea)  | 100-Small Fab - 1 | AM 1384/14-8 |
| 70 91280A640                      | ZINC PLATED CLASS 8.8 STEEL HEX HEAD SCREW M10 X 1.50 mm X 45 mm LG.                 | 6 (3 ea)     | 100-Small Fab - 1 | 5157249      |
| 40 98023A031                      | Yellow Zinc Plated Grade 8 Steel Washer 0.406" ID. X 0.812" OD. X 0.051"-0.080" THK. | 6 (3 ea)     | 100-Small Fab - 1 | 5144291      |
| RBE332A94-3400-03-17 Base         |                                                                                      | 2 pcs (1 ea) | 100-Small Fab - 1 | 5165276      |
| 134 RBE332A94-3400-03-18 Standoff |                                                                                      | 6 pcs (3 ea) | 100-Small Fab - 1 | 5161308      |

a114

| Job Allocations                    |                      |          |           |           |
|------------------------------------|----------------------|----------|-----------|-----------|
| Operation                          | Component Part       | Required | Inventory | Allocated |
| 100-Small Fab - 1                  | 90591A171            | 6        | 100       | 0         |
|                                    | 91280A640            | 6        | 0         | 0         |
|                                    | 98023A031            | 6        | 0         | 0         |
|                                    | RBE332A94-3400-03-17 | 2        | 0         | 0         |
|                                    | RBE332A94-3400-03-18 | 6        | 0         | 0         |
| Part Specifications                |                      |          |           |           |
| Specifications could not be found. |                      |          |           |           |

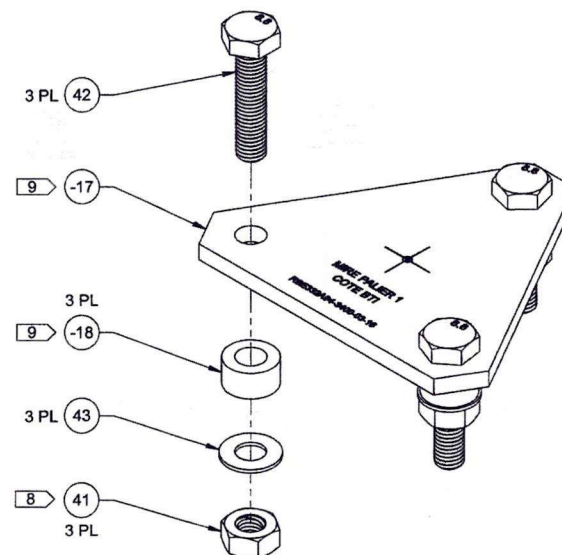
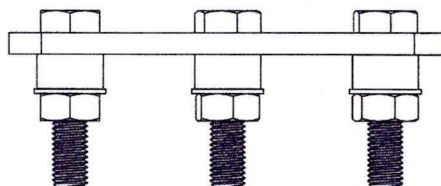
Plex 2/21/19 1:05 PM Dart.lajeunesse.marie

| ITEM # | QTY | PART #                       | PART TITLE                                                                           |
|--------|-----|------------------------------|--------------------------------------------------------------------------------------|
| -17    | 1   | RBE332A94-3400-03-17         | BASE                                                                                 |
| -18    | 3   | RBE332A94-3400-03-18         | STANDOFF                                                                             |
| 41     | 3   | McMaster#90591A171 OR EQUIV. | ZINC PLATED CLASS 8 STEEL HEX NUT M10 X 1.5 mm X 8 mm HT.                            |
| 42     | 3   | McMaster#91280A640 OR EQUIV. | ZINC PLATED CLASS 8.8 STEEL HEX HEAD SCREW M10 X 1.50 mm X 45 mm LG.                 |
| 43     | 3   | McMaster#98023A031 OR EQUIV. | YELLOW ZINC PLATED GRADE 8 STEEL WASHER 0.406" ID. X 0.812" OD. X 0.051"-0.080" THK. |



**RBE332A94-3400-03-16 TARGET BLOCK 1 FABRICATION**

10



SHOP COPY  
RETURN TO  
ENGINEERING  
UNCONTROLLED COPY  
SUBJECT TO AMENDMENT  
WITHOUT NOTICE  
WORK ORDER  
NO. 191114 MWS  
1902-21

**NOTES:**

- 1) MATERIAL: N/A
- 2) HEAT TREAT: N/A
- 3) FINISH: N/A
- 4) TOLERANCES: X.X = +/- 0.1" / +/- 1°  
X.XX = +/- 0.01" / +/- 0.5°  
X.XXX = +/- 0.005" / +/- 0.1°  
X.XXXX = +/- 0.0005" / +/- 0.05°  
PARALLELISM, ECCENTRICITY AND SYMMETRY ABOUT ALL CENTER LINES = +/- 0.005"
- 5) UNITS: INCHES UNLESS OTHERWISE NOTED
- 6) IDENTIFICATION: N/A
- 7) ASSEMBLE AS SHOWN
- 8) INSTALL ITEM 41 HAND TIGHT
- 9) ALIGN ITEM -17 AND -18 THEN APPLY LOCTITE 495 BETWEEN THE SURFACES, AND REMOVE EXCESS
- 10) THE TOOL ASSY MUST BE PACKAGED WITH A DESICCANT BAG INTO A TIGHT FITTING SEALED PLASTIC BAG

|                |     |                                                                                                                                                                                                                                                                        |                |
|----------------|-----|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------|
| DESIGN         | KPT | <b>DART AEROSPACE LTD</b>                                                                                                                                                                                                                                              |                |
| DRAWN          | KPT | HAWKESBURY, ONTARIO, CANADA                                                                                                                                                                                                                                            |                |
| CHECKED        | MBB | TOOL PART #                                                                                                                                                                                                                                                            | REV. A         |
| MFG. APPR.     | DP  | <b>RBE332A94-3400-03</b>                                                                                                                                                                                                                                               | SHEET 17 OF 26 |
| APPROVED       | W   | TITLE                                                                                                                                                                                                                                                                  | SCALE          |
|                |     | <b>T/R DRIVE ALIGNMENT INSPECTION</b>                                                                                                                                                                                                                                  | NTS            |
| DATE 2/14/2019 |     | COPYRIGHT © 2019 BY DART AEROSPACE LTD<br>THIS DOCUMENT IS PRIVATE AND CONFIDENTIAL AND IS SUPPLIED ON THE EXPRESS CONDITION THAT IT IS NOT TO BE USED FOR ANY PURPOSE OR COPIED OR REPRODUCED TO ANY OTHER PERSON WITHOUT WRITTEN PERMISSION FROM DART AEROSPACE LTD. |                |



Entered: \_\_\_\_\_ Date: \_\_\_\_\_



## WORK ORDER NON-CONFORMANCE / ROUTE UPDATE

NCR No. \_\_\_\_\_

Route update only ☐

|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        |                                                                                                                                   |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |  |                        |  |
|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--|------------------------|--|
| Job: _____<br><br>Part No. _____                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       | <b>DISPOSITION</b><br><br>Rework <input type="checkbox"/><br>Scrap <input type="checkbox"/><br>Use-as-is <input type="checkbox"/> | <b>DEPARTMENT/PROCESS</b><br><br><div style="display: flex; justify-content: space-between;"> <div>           Skid-tube <input type="checkbox"/><br/>           Machining <input type="checkbox"/><br/>           Large Fab <input type="checkbox"/> </div> <div>           Cross tube <input type="checkbox"/><br/>           Small Fab <input type="checkbox"/><br/>           Finishing <input type="checkbox"/> </div> <div>           Eng. (Non-AW) <input type="checkbox"/><br/>           Prod. Eng. Coord. <input type="checkbox"/><br/>           Rec/Store/Packaging <input type="checkbox"/> </div> <div>           Engineering <input type="checkbox"/><br/>           Water Jet <input type="checkbox"/><br/>           Supplier <input type="checkbox"/><br/>           Quality <input type="checkbox"/> </div> </div>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    |  |                        |  |
| Date :                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 | Sequence #:                                                                                                                       | QTY Affected :                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          |  | MRB (QSI042)           |  |
| Description Work Order Deviation                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       |                                                                                                                                   | Disposition                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             |  | Completed By           |  |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        |                                                                                                                                   |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |  | Lead hand / Supervisor |  |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        |                                                                                                                                   |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |  |                        |  |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        |                                                                                                                                   |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |  |                        |  |
| <b>Root Cause</b><br><br><div style="display: flex; flex-direction: column;"> <div>Operator <input type="checkbox"/></div> <div>Manufacturing Process <input type="checkbox"/></div> <div>Equip/Tooling <input type="checkbox"/></div> <div>Handling/Preservation <input type="checkbox"/></div> <div>Material <input type="checkbox"/></div> <div>Product Improvement <input type="checkbox"/></div> <div>Process Improvement <input type="checkbox"/></div> <div>Human Factors <input type="checkbox"/></div> </div> |                                                                                                                                   | <b>FAULT CATEGORY</b><br><br><div style="display: flex; flex-wrap: wrap;"> <div style="width: 50%;"> <input type="checkbox"/> Pressure/Forced<br/> <input type="checkbox"/> Bending<br/> <input type="checkbox"/> Crushing<br/> <input type="checkbox"/> Cracks<br/> <input type="checkbox"/> Crimp/Kink/Ripple/Wave/Twist<br/> <input type="checkbox"/> Marks/Chatter<br/> <input type="checkbox"/> Mislabeled         </div> <div style="width: 50%;"> <input type="checkbox"/> Contamination<br/> <input type="checkbox"/> Misaligned/off center<br/> <input type="checkbox"/> BOM/Route<br/> <input type="checkbox"/> Broken/Damage/Defect<br/> <input type="checkbox"/> Incomplete/Unclear Instructions<br/> <input type="checkbox"/> Drill Holes<br/> <input type="checkbox"/> Fit/Function         </div> <div style="width: 50%;"> <input type="checkbox"/> Power Loss/Surge<br/> <input type="checkbox"/> Folio/Program<br/> <input type="checkbox"/> Grain Direction<br/> <input type="checkbox"/> Weld<br/> <input type="checkbox"/> Wrong Stock Pulled<br/> <input type="checkbox"/> Out of Sequence<br/> <input type="checkbox"/> Off-set/Set-up         </div> <div style="width: 50%;"> <input type="checkbox"/> Positioned Wrong<br/> <input type="checkbox"/> Outside Tolerance<br/> <input type="checkbox"/> Drawing<br/> <input type="checkbox"/> Finish<br/> <input type="checkbox"/> Part Lost/Missing<br/> <input type="checkbox"/> Misread         </div> </div> |  |                        |  |
| Other/Details:                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |                                                                                                                                   |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |  |                        |  |